

TENT COOPERATION TRE/ Y

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

DEROSA, Frank, V.
F. Chau & Associates, LLP
1900 Hempstead Turnpike
Suite 501
East Meadow, NY 11554
ETATS-UNIS D'AMERIQUE

Date of mailing (day/month/year) 12 July 2000 (12.07.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference Y0999-111P	
International application No. PCT/US99/22927	International filing date (day/month/year) 01 October 1999 (01.10.99)

1. The following indications appeared on record concerning:		
<input type="checkbox"/> the applicant	<input type="checkbox"/> the inventor	<input checked="" type="checkbox"/> the agent
<input type="checkbox"/> the common representative		
Name and Address OTTERSTEDT, Paul, J. International Business Machines Corporation Yorktown IP Law Department T.J. Watson Research Center Route 134 and Kitchawan Road Yorktown Heights, NY 10598 United States of America	State of Nationality	State of Residence
	Telephone No. 914 945 3158	
	Facsimile No. 914 945 3281	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:		
<input type="checkbox"/> the person	<input checked="" type="checkbox"/> the name	<input checked="" type="checkbox"/> the address
<input type="checkbox"/> the nationality		
<input type="checkbox"/> the residence		
Name and Address DEROSA, Frank, V. F. Chau & Associates, LLP 1900 Hempstead Turnpike Suite 501 East Meadow, NY 11554 United States of America	State of Nationality	State of Residence
	Telephone No. 516 357 0091	
	Facsimile No. 516 357 0092	
	Teleprinter No.	
3. Further observations, if necessary: The new agent's address on the Demand has been considered as a change under Rule 92bis. In case of disagreement, the International Bureau should be notified immediately.		
4. A copy of this notification has been sent to:		
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned	
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned	
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer A. Karkachi
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

INTERNET COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C. 20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 12 July 2000 (12.07.00)	
International application No. PCT/US99/22927	Applicant's or agent's file reference Y0999-111P
International filing date (day/month/year) 01 October 1999 (01.10.99)	Priority date (day/month/year) 02 October 1998 (02.10.98)
Applicant COFFMAN, Daniel et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

02 May 2000 (02.05.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer <p style="text-align: center;">A. Karkachi</p> Telephone No.: (41-22) 338.83.38
--	--

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 17 NOV 2000

WIPO PCT

7

Applicant's or agent's file reference Y0999-111P	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US99/22927	International filing date (day/month/year) 01 OCTOBER 1999	Priority date (day/month/year) 02 OCTOBER 1998
International Patent Classification (IPC) or national classification and IPC IPC(7): G10L 9/06; G06F 9/00 and US Cl.: 345/326; 709/328		
Applicant INTERNATIONAL BUSINESS MACHINES CORPORATION		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 02 MAY 2000	Date of completion of this report 26 JULY 2000
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer MAJID BANANK <i>James R. Matthews</i> Telephone No. (703) 305-9716

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99/22927

I. Basis of the report

1. With regard to the **elements** of the international application:*☒ the international application as originally filed☒ the description:

pages 1-63 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

☒ the claims:

pages 64-67 , as originally filed
pages NONE , as amended (together with any statement) under Article 19
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

☒ the drawings:

pages 1-12 , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

☒ the sequence listing part of the description:

pages NONE , as originally filed
pages NONE , filed with the demand
pages NONE , filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:☐ contained in the international application in printed form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. ☒ The amendments have resulted in the cancellation of:☒ the description, pages NONE☒ the claims, Nos. NONE☒ the drawings, sheets/fig NONE5. ☐ This report has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

**Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US99/22927

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. statement

Novelty (N)	Claims <u>1-24</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-24</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-24</u>	YES
	Claims <u>NONE</u>	NO

2. citations and explanations (Rule 70.7)

Claims 1-24 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach nor fairly suggest the multi-modal conversational user interface (CUI), the conversational engines, the conversational kernel and the conversational application program interface, as claimed.

----- NEW CITATIONS -----
NONE

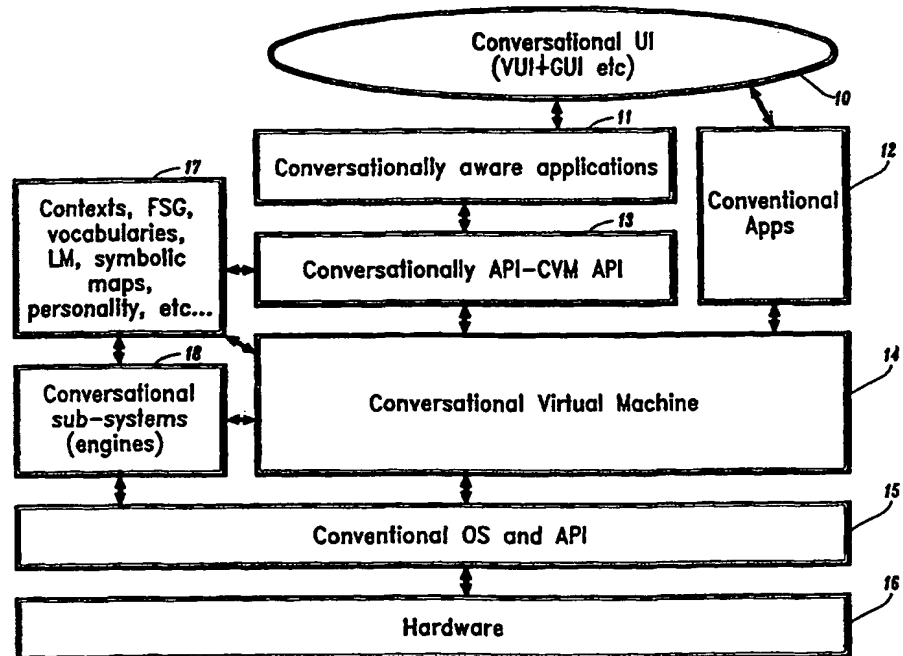


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : G10L 9/06, G06F 9/00	A3	(11) International Publication Number: WO 00/20962 (43) International Publication Date: 13 April 2000 (13.04.00)
(21) International Application Number: PCT/US99/22927 (22) International Filing Date: 1 October 1999 (01.10.99) (30) Priority Data: 60/102,957 2 October 1998 (02.10.98) US 60/117,595 27 January 1999 (27.01.99) US (71) Applicant (for all designated States except US): INTERNATIONAL BUSINESS MACHINES CORPORATION [US/US]; Old Orchard Road, Armonk, NY 10504 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): COFFMAN, Daniel [US/US]; Barrett Circle, Carmel, NY 10512 (US). COMERFORD, Liam, D. [US/US]; 54 Valley Road, Carmel, NY 10512 (US). DEGENNARO, Steven, V. [US/US]; 38 Coulter Avenue, Carmel, NY 10512 (US). EPSTEIN, Edward, A. [US/US]; 219 Canopus Hollow Road, Putnam Valley, NY 10579 (US). GOPALAKRISHNAN, Ponani [IN/US]; 3073 Radcliff Drive, Yorktown Heights, NY 10598 (US). MAES, Stephane, H. [BE/US]; 1 Wintergreen Hill Road, Danbury, CT 06811 (US). NAHAMOO, David [IR/US]; 12 Elmwood Road, White Plains, NY 10605 (US).		(74) Agent: OTTERSTEDT, Paul, J.; International Business Machines Corporation, Yorktown IP Law Department, T.J. Watson Research Center, Route 134 and Kitchawan Road, Yorktown Heights, NY 10598 (US). (81) Designated States: CA, CN, IL, IN, JP, KR, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> (88) Date of publication of the international search report: 13 July 2000 (13.07.00)

(54) Title: CONVERSATIONAL COMPUTING VIA CONVERSATIONAL VIRTUAL MACHINE**(57) Abstract**

A conversational computing system that provides a universal coordinated multi-modal conversational user interface (CUI) (10) across a plurality of conversationally aware applications (11) (i.e., applications that "speak" conversational protocols) and conventional applications (12). The conversationally aware applications (11) communicate with a conversational kernel (14) via conversational application APIs (13). The conversational kernel (14) controls the dialog across applications and devices (local and networked) on the basis of their registered conversational capabilities and requirements and provides a unified conversational user interface and conversational services and behaviors. The conversational computing system may be built on top of a conventional operating system and APIs (15) and conventional device hardware (16).



The conversational kernel (14) handles all I/O processing and controls conversational engines (18). The conversational kernel (14) converts voice requests into queries and converts outputs and results into spoken messages using conversational engines (18) and conversational arguments (17). The conversational application API (13) conveys all the information for the conversational kernel (14) to transform queries into application calls and conversely convert output into speech, appropriately sorted before being provided to the user.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakhstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US99/22927

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G10L 9/06; G06F 9/00

US CL : 345/326; 709/328

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 345/326; 709/328

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WEST; EAST; ACM; MSDN

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 5,884,266 A (DVORAK) 16 MARCH 1999, ALL	1, 5-8
A	US 5,794,205 A (WALTERS ET AL) 11 AUGUST 1998, ALL	1, 5-8
A	US 5,283,888 A (DAO ET AL) 01 FEBRUARY 1994, ALL	1
A	US 5,133,004 A (HEILEMAN JR. ET AL) 21 JULY 1992, ALL	1, 5-8, 16
A	US 5,255,305 A (SATTAR) 19 OCTOBER 1993, ALL	1

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*Z* document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means	
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

16 MARCH 2000

Date of mailing of the international search report

18 APR 2000

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231
Facsimile No. (703) 305-3230

Authorized officer

ALVIN OBERLEY

Telephone No. (703) 305-8716